Ferns of Papua.—BRAUSE[9] has published a list of Papuan ferns collected by LEDERMANN in the expedition of 1912–1913, in connection with a study of the Papuan flora by LAUTERBACH. It illustrates how any investigation of the tropics increases very materially the number of known ferns. The present list includes 555 species, distributed among 43 genera. The following 9 genera include 400 of the species: *Dryopteris* (112), *Asplenium* (52), *Trichomanes* (51), *Hymenophyllum* (35), *Alsophila* (34), *Lindsaya* (31), *Diplazium* (31), *Aspidium* (29), *Cyathea* (25). There are described 78 new species, *Dryopteris* including 24, *Alsophila* 13, *Cyathea* 7, and *Blechnum* 7, the remaining 27 new species being distributed among 12 genera.—J. M. C.

Gentes Herbarum.—Under this title BAILEY[10] has begun a new serial publication, the first fascicle containing an extensive list of plants which he collected in China in the spring and summer of 1917. The several localities are in central China, and the cultivated plants are not neglected. The collection includes 20 new species distributed among 13 genera, and 15 new varieties and forms. There are also transfers and new combinations. "The total systematic novelties and taxonomic changes are 44." The report contains also some very attractive photographs of topography and "interesting trees."—J. M. C.

Seedling anatomy.—HOLDEN,[11] in continuing studies of the anatomy of teratological seedlings, has investigated atypical seedlings of *Impatiens Roylei*, an Indian species naturalized in England. One of the two groups of these seedlings shows a very complete series illustrating the development of a "closely syncotylous condition" from the normal; while the other group shows a single cotyledon with no "macroscopic evidence" of syncotylous origin. The relation of the facts to the origin of monocotyledony is evident, but a number of alternative conclusions are still in evidence.—J. M. C.

Apogamy in Osmunda.—Mrs. BROWN[12] has succeeded in securing apogamous outgrowths in cultures of *Osmunda cinnamomea* and *O. Claytoniana*. It is stated that the only reported case of apogamy in this genus is given by LEITGEB, presumably using *O. regalis*. His observations have never been confirmed, although investigators since have tried to induce apogamy in this species under varied cultural conditions. Mrs. BROWN included *O. regalis*

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[9] BRAUSE, G., Beiträge zur Flora von Papuasien. VII. Bot. Jahrb. **56**:31–160. 1920.

[10] BAILEY, L. H., Gentes Herbarum. I. A collection of plants in China. **1**:1–49. *figs. 17*. 1920.

[11] HOLDEN, H. S., Observations on the anatomy of teratological seedlings. III. On the anatomy of some atypical seedlings of *Impatiens Roylei* Walp. Ann. Botany **34**:321–344. *figs. 113*. 1920.

[12] BROWN, ELIZABETH DOROTHY WUIST, Apogamy in *Osmunda cinnamomea* and *O. Claytoniana*. Bull Torr. Bot. Club **47**:339–345. *figs.* 7. 1920.

in her cultures and obtained "apogamous outgrowths" in that species also.—J. M. C.

Peat soils.—In a discussion of the agricultural possibilities of the vast peat areas of Minnesota, estimated at 7,000,000 acres, ALWAY[13] has shown the close relationship between agricultural and ecological problems. There is a general discussion of peat soils, a synopsis of the history of peat-land control in Europe, and a review of the literature. The two systems of control discussed are those by chemical treatment and those by burning. Toxic substances in the peat and in the substratum are also considered.—GEO. D. FULLER.

Ultra-violet light and yeast.—FEUER and TANNER[14] have studied the effect of ultra-violet light on 30 different species, strains, and varieties of yeastlike fungi, and conclude that these organisms are not very resistant to ultra-violet light, and that this might be used in controlling developing yeast in the industries. Further quantitative work is under way.—WM. CROCKER.

A non-absorbing atmometer mounting.—LIVINGSTON and THONE[15] have devised a new and much simplified mounting for porous cup atmometers which prevents absorption during periods of precipitation. The necessary valve is constructed in a simple straight glass tube by the use of a piece of mineral wool and a drop of mercury.—GEO. D. FULLER.

Internal stomata.—BERGMAN,[16] having observed stomata in the endocarp of the cultivated cranberry, extended his observations to numerous ericads, finding internal stomata in a number of them. Experiments indicated that they had not retained their ability to function, and the general conclusion is advanced that they are relics retained by a "modified leaf."—J. M. C.

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[13] ALWAY, F. J., Agricultural value and reclamation of Minnesota peat soils. Univ. Minn. Agric. Exper. Sta. Bull. 188. pp. 136. *figs.* 54. 1920.

[14] FEUER, B., and TANNER, F. R., The action of ultra-violet light on the yeastlike fungi. Jour. Ind. Eng. Chem. **12**:740, 741. 1920.

[15] LIVINGSTON, B. E., and THONE, FRANK, A simplified non-absorbing mounting for porous porcelain atmometers. Science N.S. **52**:85–87. 1920.

[16] BERGMAN, H. F., Internal stomata in ericaceous and other unrelated fruits. Bull. Torr. Bot. Club **47**:213–221. *figs.* 9. 1920.